

REMARKS

Claims 1-29 are pending. Applicants respectfully request that the Examiner take the following remarks into consideration.

The present invention relates to improved, weather-resistant collated fasteners. As explained in the background section of the specification of Applicants' application, historically, hot dipped galvanized fasteners have been recommended by the building codes and the pressure treatment formulators for use in pressure treated wood, largely due to the sacrificial nature of zinc that is used in the coatings and the thicker coatings provided by the hot dip process. (Specification at [0008].) In view of the change in the pressure treated wood industry to move away from chromated copper arsenate, and toward more corrosive wood-preserving materials, hot dipped galvanized steel fasteners continue to be recommended. (Specification at [0009].) Although the coatings provided by the hot dipping process tend to be thicker, they are also less uniform than electrodeposited coatings. As a result, hot-dipped fasteners are more difficult to effectively collate. (Specification at [0007] and [0036].) On the other hand, electrodeposited coatings tend to be more brittle than hot dipped coatings. (Specification at [0007].) In fact, the Applicants found that increasing the electrodeposited zinc thickness on the head of a fastener created a condition where the zinc would chip off of the fastener while being driven with a pneumatic tool. (Specification at [0044].) The Applicants then found that fasteners with textured heads that were plated in the same plating conditions as fasteners without textured heads performed better (less chipping) than the fasteners without the textured heads. (Specification at [0046].)

In summary, Applicants have defied the conventional wisdom in the industry and have found that by texturing the heads of the fasteners, a relatively thick electrodeposited coating may be provided to the fasteners such that the fasteners can be efficiently collated, and can perform as well as, or even better than the widely accepted hot dipped fasteners. (Specification at [0011] and FIGs. 8 and 9.)

In the Office Action dated January 27, 2005, the drawings were objected to as being informal. A full set of formal drawings are being filed herewith. No changes have been made to the drawings; they are merely a formal set of the drawings that was originally filed with the application on April 16, 2004. Accordingly, Applicants respectfully request that the objection to the drawings be withdrawn.

In the Office Action, claims 1-12 were rejected under 35 U.S.C. §103(a) as being unpatentable over Kish et al. (U.S. Patent No. 5,749,692), in view of Perkins (U.S. Patent No.

3,861,527), Hyner et al. (U.S. Patent No. 5,275,892), and Gabriel et al. (U.S. Patent No. 5,476,687). Applicants respectfully traverse this rejection.

Independent claim 1 recites a package of collated galvanized carbon steel fasteners suitable for use in adverse environmental conditions, the package including, *inter alia*, a plurality of fasteners and an attachment structure. As recited by claim 1, each fastener includes, *inter alia*, a head and integral shank formed from carbon steel, an electrodeposited coating deposited directly on the carbon steel head and shank, the electrodeposited coating comprising zinc and having an average thickness of greater than about 1.0 mil. As recited by claim 1, at least a portion of the top surface of the carbon steel head is textured to improve adhesion between the electrodeposited coating and the top surface.

Applicants respectfully submit that it appears that the Examiner is using Applicants' claim as a roadmap and is using impermissible hindsight to pick and choose portions of the references in an attempt to establish a *prima facie* case of obviousness. This the Examiner cannot do. (See MPEP §2141.) To establish a *prima facie* case of obviousness, there must be some suggestion or motivation to combine the references, there must be a reasonable expectation of success, and when combining the references, all of the features of the claim must be taught or suggested. (MPEP §2143.) Applicants respectfully submit that the Examiner has not met any of these criteria to establish a *prima facie* case of obviousness. Specifically, as will be discussed below, Applicants respectfully submit that none of the references teach or even remotely suggest the combination of collated fasteners with an electrodeposited coating deposited directly on the carbon steel head and shank, the electrodeposited coating comprising zinc and having an average thickness of greater than about 1.0 mil, wherein at least a portion of the top surface of the carbon steel head is textured to improve adhesion between the electrodeposited coating and the top surface, as recited by claim 1.

Kish et al. discloses a fastener (20) that has been heat-treated, zinc-plated, and chromate coated, and then coated with a polymeric material. (Kish et al. at col. 3, lns. 37-45.) Kish et al. teaches that the polymeric coating improves the ease of driving the fastener and increases the holding power of the fastener. (Kish et al. at col. 1, lns. 11-14.) However, Kish et al. does not disclose a package of collated galvanized carbon steel fasteners suitable for use in adverse environmental conditions that includes a plurality of fasteners, with each fastener comprising, *inter alia*, at least a portion of the top surface of the carbon steel head is textured to improve adhesion between the electrodeposited coating and the top surface, and

an attachment structure, as recited by claim 1. Moreover, as conceded by the Examiner, Kish et al. is silent to the actual thicknesses of the layers.

Perkins discloses a package of collated fasteners (S). (Perkins at col. 2, lns. 17-21.) A bond coating (B) is applied to the shank exteriors of the assembled fasteners to form the strip (S). (Perkins at col. 3, lns. 38-40, FIG. 3.) Perkins also discloses that the head (13) of each fastener (10) preferably has a roughened upper surface (13a) to avoid the problem of skip-off when the fastener is being driven by the driver blade of a high speed power tool. (Perkins at col. 2, lns. 42-46.) Nowhere does Perkins disclose or even remotely suggest an electrodeposited coating comprising zinc having an average thickness of greater than about 1.0 mil. The Examiner asserts that "Perkins teaches that it is customary to provide a textured surface to the head of a fastener to facilitate the non-slippage of a striking head when used in a tool." (Office Action at p. 3.) Applicants respectfully submit nowhere does Perkins indicate that it is "customary" to provide a textured surface to a head. The Examiner also asserts "[a]s is known in the art, the textured surface would obviously also double as an improved adhering surface for the polymeric coating," but nowhere does Perkins disclose or suggest that the polymeric coating, which is only applied to the shank exteriors of the assembled fasteners, covers the heads of the fasteners. The only coating disclosed by Perkins is the bond coating (B) that is used to collate the fasteners. (Perkins at col. 3, lns. 38-44.) Perkins is completely silent about the use of fastener coatings to protect the fastener. Thus, Perkins does not teach or suggest "an electrodeposited coating deposited directly on the carbon steel head and shank, the electrodeposited coating comprising zinc and having an average thickness of greater than about 1.0 mil, wherein at least a portion of the top surface of the carbon steel head is textured to improve adhesion between the electrodeposited coating and the top surface," as recited by claim 1. The Examiner is impermissibly using the teachings of Applicants' application to assert that a hammer or other striking surface would mar or chip the coating off of the head easier without the textured surface. (See Applicants' specification at [0044] – [0046].)

Hyner et al. teaches a multi-layer corrosion resistance coating for fasteners. (Hyner et al. at Abstract.) The layers include a layer of nickel or nickel based alloy over the metal fastener, a second layer of zinc based alloy over the nickel or nickel based alloy, a layer of zinc plating applied to the zinc alloy, and a plating of copper, nickel, or chromium (or chromium substitute) or a chromate conversion film layer. (Hyner et al. at col. 2, lns. 46-53.) The first layer of nickel or nickel alloy has a thickness of between 0.05 mil and 0.5 mil.

Although Hyner et al. discloses that the zinc layer may generally be in the range from about 3 mils – 0.1 mil, the zinc layer is the third layer and is not deposited directly on the metal fastener, as claimed in claim 1. There is simply no motivation to modify Hyner et al. and eliminate the first two layers, and therefore, there is no motivation to combine Hyner et al. with Kish et al. (See e.g., Hyner et al. at col. 3, ln. 61 – col. 4, ln. 6.) Hyner et al. even stresses the importance of providing the separate layer of zinc based alloy. (See Hyner et al. at col. 3, ln. 61 – col. 4, ln. 14.) Moreover, Hyner et al. does not teach or suggest that the heads of the fasteners are textured, or an attachment structure to attach a plurality of fasteners into a package, as recited by claim 1.

Gabriel et al. teaches a process for coating a metal fastener with a coating that has a particular affinity for plaster materials. (Gabriel et al. at Abstract.) Gabriel teaches that the head (11) of the coated nail (10) is cupped to provide a reservoir for a spackling compound applied over the coated nail 10. (Gabriel et al. at col. 5, lns. 59-62.) Nowhere does Gabriel teach or suggest that the head of the fastener is textured. Moreover, Gabriel specifically teaches that the coating composition has demonstrated an affinity for plaster-like materials and, therefore, the spackling compound adheres to the fastener head.

In summary, even if the four separate prior art patents of Kish et al., Perkins, Hyner et al. and Gabriel et al. were to be combined, all of the features of claim 1 are not disclosed or suggest. Specifically, none of the references teaches – at least - the features of an electrodeposited coating deposited directly on the carbon steel head and shank, the electrodeposited coating comprising zinc and having an average thickness of greater than about 1.0 mil, wherein at least a portion of the top surface of the carbon steel head is textured to improve adhesion between the electrodeposited coating and the top surface, as recited by claim 1. The Examiner simply has not met his burden of establishing a *prima facie* case of obviousness. Accordingly, Applicants respectfully submit that claim 1 and claims 2-12 that depend from claim 1 are patentable over Kish et al. in view of Perkins, Hyner et al., and Gabriel et al., and respectfully request that the rejection to claims 1-12 be withdrawn.

In the Office Action, claims 13-28 were rejected under 35 U.S.C. §103(a) as being unpatentable over Kish et al. in view of Lat et al. (U.S. Patent No. 5,178,903), Perkins, and Hyner et al. Applicants respectfully traverse this rejection.

Independent claim 13 recites a combination of at least one piece of pressure treated wood and a galvanized carbon steel fastener. The fastener includes, *inter alia*, an electrodeposited coating deposited directly on a surface of the carbon steel head and shank,

the electrodeposited coating comprising zinc and having an average thickness of greater than about 1.0 mil, wherein at least a portion of the top surface of the carbon steel head is textured to improve adhesion between the electrodeposited coating and the top surface.

Kish et al. is discussed above. Lat et al. teaches a polymeric coating for a metal fastener. (Lat et al. at Abstract.) Nowhere does Lat et al. disclose or suggest that the head of the fastener is textured. Perkins and Hyner et al. are also discussed above. Neither of these references discloses or suggests a fastener that includes, *inter alia*, an electrodeposited coating deposited directly on a surface of the carbon steel head and shank, the electrodeposited coating comprising zinc and having an average thickness of greater than about 1.0 mil, wherein at least a portion of the top surface of the carbon steel head is textured to improve adhesion between the electrodeposited coating and the top surface, as recited by claim 13. As such, the Examiner cannot establish a *prima facie* case of obviousness. Accordingly, Applicants respectfully submit that claim 13 and claims 14-26 that depend therefrom are patentable over Kish et al. in view of Lat et al., Perkins, and Hyner et al., and respectfully request that the rejection to claims 13-26 be withdrawn.

Independent claim 27 recites a galvanized carbon steel fastener for use in adverse environmental conditions that includes, *inter alia*, an electrodeposited coating deposited directly on a surface of the carbon steel head and shank, the electrodeposited coating comprising zinc and having an average thickness of greater than about 1.0 mil, wherein at least a portion of the top surface of the carbon steel head is textured to improve adhesion between the electrodeposited coating and the top surface.

All of the references applied by the Examiner are discussed above. None of these references disclose or suggest a fastener that includes, *inter alia*, an electrodeposited coating deposited directly on a surface of the carbon steel head and shank, the electrodeposited coating comprising zinc and having an average thickness of greater than about 1.0 mil, wherein at least a portion of the top surface of the carbon steel head is textured to improve adhesion between the electrodeposited coating and the top surface, as recited by claim 27. As such, the Examiner cannot establish a *prima facie* case of obviousness. Moreover, Applicants respectfully submit that the Examiner is merely using Applicants' claims and disclosure as a roadmap, and using impermissible hindsight in cobbling these references together in an attempt to reject Applicants' claims. Applicants respectfully submit that claim 27 and claim 28 that depends therefrom are patentable over Kish et al. in view of Lat et al.,

Perkins, and Hyner et al., and respectfully request that the rejection to claims 27 and 28 be withdrawn.

All objections and rejections having been addressed, it is respectfully submitted that the present application is in a condition for allowance and a Notice to that effect is earnestly solicited. If any point remains in issue which the Examiner feels may be best resolved through a personal or telephone interview, please contact the undersigned at the telephone number listed below.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,
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